

Keratin Supplementation And Skin, Hair, And Nail Health

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Today we'll take a quick look at a summary by [Examine.com](#) on a study that examined the effects of supplementing with keratin hydrolysate and its possible effects on skin, hair, and nail health.

Before we continue, for those unfamiliar with keratin, it's a type of fibrous structural protein found in the epithelial cells of the outermost layers of the skin, as well as in hair, nails, horns, hooves, wool, feathers, and the scales of vertebrates. Keratin is composed of long chains of amino acids, which assemble into bundles to form intermediate filaments. These filaments are tough and provide mechanical strength and rigidity to hair, nails, and skin, allowing them to maintain their shape and withstand external stress.

Now, let's see what they found.

Quick Summary

"In this randomized controlled trial, supplementation with a keratin hydrolysate derived from poultry feathers improved parameters related to skin, hair, and nail health in women who exhibited signs of skin, hair, and nail aging."

Well, since keratin is a vital structural part of these tissues, if your diet is lacking in the building blocks of keratin, adding some by supplementation, if you can metabolize and use it, should help a little with tissue repair, healing and maintenance. However, these tissues such as skin, hair, and nails are composed of a lot of different compounds and the processes for healing are also dependable on certain nutrients and compounds, and if you are deficient in any of those, the results of only taking a "keratin" supplement will be very modest or nonexistent. This is simple logic.

So, to summarize, all animals including humans synthesize keratin as needed, provided we have all the building blocks available, as in the amino acids, key nutrients and other chemical compounds needed for the building process. If we lack any of these, as in following a plant-heavy diet, this process will be hampered and your skin, hair, and nails will degrade (as we can see in all vegans.)

In other words, we can either get keratin directly from consuming animals and especially their skin and organs. However, keratin cannot be directly used as new keratin in the body. So it needs to be broken down by fermentation or enzymatic digestion in the gut, providing the amino acids that the body then can use to synthesize its own keratin. Or, as keratin is

simply a structural protein composed of amino acids, we can simply make sure that we get plenty of amino acids from consuming animal protein and making sure we get all other essential nutrients, and our body will have no problem making all the keratin it needs.

The human body cannot directly use **keratin** from animal sources to build skin, hair, or nails. Instead, **it must break down keratin into its constituent amino acids, such as cysteine, glycine, and others, through enzymatic digestion.**

Once the amino acids are released, the body can then utilize them to synthesize its own keratin proteins through a process called protein synthesis.

What was studied?

“The effect of supplementation with Kera-Diet (a keratin hydrolysate derived from poultry feathers that provides at least 83.5% of free-form amino acids) on parameters related to skin, hair, and nail health.

The primary outcome (which was used to calculate the required sample size) was wrinkle depth at the “crow’s feet” area around the outer corners of the eyes.

The secondary outcomes included other facial skin health parameters (including skin roughness, skin firmness, skin elasticity, skin gloss, deep skin moisturization, skin thickness, and skin fiber network) and hair and nail health parameters (including hair gloss, nail gloss, and nail hardness).”

Some of these measurements are a bit diffuse and easy to falsify or simply misinterpret. But let’s go with it.

Who was studied?

“90 women (ages 35–65) with skin phototypes of I–IV (very fair to light brown skin) with crow’s feet wrinkles, mild to moderate skin sagging, damaged/brittle hair, and brittle nails.”

If you have any of these problems at the incredibly young age of 35, or even before your 60’s, your diet and lifestyle is extreme shit, to put it politely. Thus, the building blocks of keratin would probably help a little if you can metabolize and use it. With that said, vital nutrients and compounds for skin health include keratin, selenium, vitamin D (from animal food or sun exposure,) animal fats (as in saturated fats, cholesterol, and omega-3,) calcium,

collagen, and vitamin C (from animal foods.)

For hair, keratin, collagen, silicon, calcium, copper, zinc, and animal fats play vital roles. And for nails, keratin, biotin, vitamin B12, folate, iron, magnesium, silicon, zinc, and animal fats are vital.

And please note that all of these nutrients and compounds are only bioavailable through animal-based foods, you cannot get them from artificial chemically derived supplements, nor can you get them from anything plant-based as the bioconversion is abysmal (and any plant-based food will flood you with toxins.)

In biology, biochemistry, and physiology, it is widely accepted that nutrients found in animal-derived foods, such as meat and organ meats, are stored similarly to those in human tissues. This means that the nutrients in animal products are:

1. **Fully bioavailable:** The nutrients in animal-derived foods are readily absorbed and utilized by the human body, just like those stored in human tissues.
2. **Non-toxic:** Since the nutrients are stored in a similar manner, they cannot be toxic or harmful to humans. The body's natural processes recognize and utilize these nutrients without adverse effects.

Plant Nutrients Require Conversion

According to biology, physiology, and biochemistry, vitamins, minerals, proteins, and unsaturated fats found in plants have distinct chemical structures that differ from those found in human tissues. This chemical disparity renders these plant-derived molecules non-bioavailable to humans, meaning they cannot be directly utilized by the body without modification.

The presence of natural toxins in plant-based foods can pose a significant health risk to humans, particularly if consumed in large quantities or over an extended period. These toxins can cause a range of adverse health effects, from mild gastrointestinal disturbances to more severe systemic toxicity.

Now, as this keratin hydrolysate is derived from animal parts, it will at least be bioavailable, unless damaged in the manufacturing process. However, is it actually similar to the amino structure of keratin as it is found in animal tissues?

Of course not. The feathers are put in an alkaline solution that breaks down the keratin structure and then the solution is hydrolyzed with a proteolytic enzyme to break it down into peptides and amino acids. So, a keratin hydrolysate is simply amino acids with a *similar profile* to the amino acid structure of hair keratin. It's simply a "protein powder" with an amino acid profile similar to that of keratin.

Based on the provided biochemistry information, keratin hydrolysate is not entirely "real" keratin in its native form.

Hydrolysis, whether acidic, alkaline, enzymatic, microbial, or thermal, breaks down the disulfide bonds and peptide bonds within keratin proteins, releasing individual amino acids or smaller peptides.

Keratin hydrolysate is a mixture of free amino acids, peptides, and potentially some residual keratin fragments, rather than intact keratin proteins. The resulting profile of amino acids may be similar to that of native keratin, but it is not identical.

According to biochemistry, keratin hydrolysate is a protein powder that has an amino acid profile similar to that of keratin. This means that the amino acids present in keratin hydrolysate are similar to those found in keratin, a protein that is naturally produced by the body and is a key component of hair, skin, and nails.

Interestingly, it is possible to obtain the same amino acids found in keratin hydrolysate from eating animal-based foods. This suggests that consuming keratin hydrolysate may not be necessary to obtain the benefits of keratin, as the same amino acids can be obtained through a balanced diet that includes animal-based foods.

In other words, if you're "protein deficient" it might help, and as the amino acid ratio is similar to that of keratin, your body might be inclined to use some of it to actually build keratin instead of wasting some of the amino acids on other processes.

Still, you would get a much better result by simply consuming enough protein and then perhaps focus on some foods that actually contain a lot of the key amino acids used to synthesize keratin such as eggs, beef liver, any kind of meat, fish, milk and yogurt.

How was it studied?

“A 90-day randomized controlled trial was conducted in which the participants were assigned to take 1 of 3 treatments daily:

- *500 milligrams (mg) of Kera-Diet*
- *1,000 mg of Kera-Diet*
- *A placebo*

All of the participants were supplied with the same base cream, which they were asked to apply twice a day (in the morning and evening) in place of their usual face cream.”

Okay then.

What were the results?

“At the end of the trial, wrinkle depth decreased (improved) in the 500 mg Kera-Diet group (−9.4%) and 1,000 mg Kera-Diet group (−12%) compared to the placebo group (+2.4%). All of the other skin, hair, and nail parameters (other than skin fiber network ones) improved in the two Kera-Diet groups compared to the placebo group.

The researchers did not compare the effectiveness of the two different doses of Kera-Diet.”

Those improvements are not that great. They would have done much better if they switched to our natural human diet of animal-based foods, as that would have remedied any and all nutrient deficiencies, as well as provided all the nutrients and also the key amino acids for the production of keratin for the skin, hair, and nails so they can start healing and improving.

According to biology and physiology, to really heal and improve your skin, hair, and nails, you need to get bioavailable nutrients and remedy any nutrient deficiencies. Some of the key nutrients that play a crucial role in maintaining healthy skin, hair, and nails include:

- **Selenium:** essential for antioxidant functions and protecting cells from damage
- **Vitamin D:** important for skin health and immune function
- **Zinc:** necessary for hair growth, wound healing, and protein synthesis
- **Calcium:** crucial for nail health and bone density
- **Cholesterol:** important for skin and hair health, as well as hormone production
- **Omega-3:** essential fatty acids that promote healthy skin, hair, and nail growth

According to biological, biochemical, and physiological principles, **micronutrients in plant-based foods are not fully bioavailable for humans** due to their chemical form and the presence of antinutrients. In contrast, **nutrients stored in animal cells and consumed through an animal-based diet are fully bioavailable.**

So, while keratin hydrolysate might not be a total scam, it's certainly an extremely expensive and just as limited protein (amino acid) powder. Simple dietary changes would produce better results.

Anything else I need to know?

“The trial was funded by BCF Life Sciences, the manufacturer of Kera-Diet.”

Of course it was. And thus you cannot really trust the results, as they might have been a bit exaggerated, especially concerning all the mechanics and nutrients needed for tissue regeneration.

And to end this little review, all I can say is that I have witnessed hundreds of ex-vegans as well as other people improving their skin, hair, and nail health by unimaginable amounts from switching to an animal-based or preferably a carnivore diet. Actually, all their health problems improved and eventually went away. Your body is incredible at repairing and restoring health

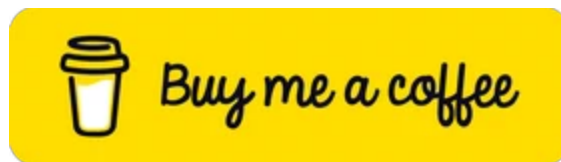
as long as you stop poisoning it with plant-based and processed crap and actually give it real bioavailable nutrients. And that is why every single human that is on a carnivore diet looks a lot younger than his or her age, while all vegans look more than twice their actual age.

So, forget about supplements. Stop wasting your money (and potentially poison yourself as most supplements are artificial and extremely toxic;) and fix your diet instead!

If you need help with any kind of health problems or transitioning from your current way of eating to our natural species-appropriate, species-specific way of eating, I'm available for both coaching and consultation.

Coaching and Consultation

And if you found the article and my insights helpful and enjoy my daily free information, please consider donating to help pay the webhosting bills and keep the site running. And if you're interested in discussing and sharing information with likeminded people, consider joining our uncensored community at Ungovernable.se. Thank you!



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